A DESCRIPTION OF THE NESTS AND EGGS OF THE COMMON BIRDS OCCURRING IN THE PLAINS OF THE UNITED PROVINCES.

BY

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PART II.

(With 2 plates.)

(Continued from page 1074 of Vol. XXVIII.)

Zosterops palpebrosa (226) . . . The Indian White-eye.
Local name Unknown.
Anglo-Indian name Yellow Hammer.

These are insignificant birds, common in the Eastern and Western districts alike. They are gregarious to a certain extent, and in the winter are met with in small flocks. In the breeding season the parties seem to break up, and then they are seen, as a rule, only in couples. Domestic operations are commenced about April and continue, according to locality, till September. I have taken eggs in all these months.

The nest is a perfect work of art, and on account of its frailty is usually well concealed and difficult of location. Trees and bushes with overhanging branches and heavy foliage seem to be specially favoured; the nest being always suspended (never wedged in) from a slender fork or several twigs amidst an overhanging cluster of leaves; being, in fact, a perfect miniature of an Oriole's.

Quite recently I had the good fortune to find a nest at its very commencement. It was placed at the end of an overhanging branch (amidst a bunch of foliage) of a gigantic Tamarind tree in my compound. The nest was completed in 12 days, then there was an interval of 4 days, and then a single egg was laid each night, which were not incubated till the clutch of three was complete; and throughout this period I noticed only the one bird in the vicinity; probably the hen. The nest was about 8 feet from the ground, and my servants used to congregate under it during the day, and light fires under it at night, but without disturbing the bird in the least. In fact, she used to allow me to stand and watch her in the nest from a distance of a few feet. It was very amusing to watch her sitting perfectly still, bill pointing upwards, and without even the flicker of an eyelid; imagining no doubt that she was thus escaping observation. The nest was eventually discovered, and two of the eggs rifled by that outrageous dasoit Dendrocitta rufa. But I was in time to rescue the third, and reproduce a photograph of the nest.

The nest is constructed throughout of vegetable fibres, neatly and closely interwoven, and held in position by cobwebs and vegetable down; so frail as to be almost transparent. The egg-cavity is beautifully cup-shaped; lined, usually, with fine, black hairs, and the normal number of eggs is three. In shape they are, typically, rather longish ovals a good deal pointed towards the small end, and of a uniform pale blue colour throughout; a few eggs having a darker zone round the large end. A normal egg would measure about 0.62 by 0.46 inch.

Ægithina tiphia (243) ... The Common Iora.

Local name Shavbiga. Anglo-Indian name Yellow-Bird.

I should think that this species occurs in almost every district in the Province; but where the accomplished collector would consider it common, the amateur would probably characterise it as care. The fact of the matter is that on account of the bird's highly developed ventriloquistic attainments they are clusive creatures; so that unless one is an adept at distinguishing bird-notes they

will quite easily escape observation. These notes, especially in the breeding season, are many and varied, with the high-pitched ones decidedly ventriloguistic: and even when located will not reveal the bird till after diligent search.

An interesting feature about the nidification of this species, of which I can find no mention elsewhere, is the plumage display indulged in by the males. scene is usually enacted amidst heavy, green foliage, so that close observation is necessary to follow the procedure. In summer plumage the male is a goodly picture of black, white and gold, a colour scheme which is rendered much more picturesque during the period of display. While the hen, seemingly quite uninterested and oblivious of the close proximity of her lord and master, hops casually about the branches in search of food, the male fusses around and about her, stopping still at frequent intervals to expand his tail, droop his wings, and to raise his little head skywards in a stately pose calculated to give the best effect to his vivid colouring; and, incidentally, to attract the attention of his lady-love.

Each time the head is raised the throat swells and gives expression to a very faint, but clear, sweet, and musical whistle, somewhat prolonged. The scene changes suddenly, and in a paroxysm of excitement he flits from branch to branch to the accompaniment of a loud twittering and fluttering of wings, to rise suddenly into the air, and hurl himself, a ball of feathers, on to some favourite perch; the same mad proceeding being repeated again and again. Then his energies being expended he settles down to rest, and continues his placid hunt

for insects, as though nothing had happened.

I have taken eggs of this species in both June and July, and last year a pair started to build a nest in my compound as late as the third week of August; but the heavy rain destroyed it before the eggs were laid. Almost any tree suits their purpose equally well, for I have taken their nests on Guava, Seesam, Ingadulcis, Mango, and other trees with comparative regularity; but never at any great height from the ground. They are composed of fine twigs and fibres plastered over with white cobwebs and gossamer threads, and are either wedged firmly into the fork of a branch, or on to the top of a horizontal one. They are circular in shape with the egg-cavity forming a perfect cup; the internal lining being of fine twigs closely interwoven. A few nests I have seen have been more or less cylindrical externally with the cup-shaped egg-cavity let in on top; while others have been the shape of an inverted cone.

The eggs, usually three in number, appear to be of two distinct types. In some the ground-colour varies from a greyish to a pinkish white marked with longitudinal blotches and streaks of a reddish brown shade; while in others the markings are a distinct chocolate. Between these two types intermediate varieties, varying in tone and character of the markings, occur not infrequently; some specimens presenting secondary markings of purple shades. In shape they are, typically, moderately broad ovals, slightly pointed towards one end;

and measure about 0.69 by 0.55 inch.

Molpastes hæmorrhous (278) The Madras Red-vented Bulbul. Local name Anglo-Indian name Bulbul.

The Common Bulbul. . .

This species is common throughout the Province, and is a familiar garden bird. The breeding season is from about March to August, though the bulk seem to breed in June and July, the nests being started shortly before the advent of the rains.

Being essentially arboreal in their habits, only occasionally descending to the ground, they do not seem to favour any particular kind of tree when selecting a site for their nests; nor is any importance attached to height; the nests being found as commonly at three feet as at thirty. Considerable importance, however, is attached to concealment; each nest being carefully hidden away amidst thick foliage. Sometimes they are fixed on to the top of a thick, horizontal branch, sometimes wedged firmly into the angle of a forked branch, and sometimes into the space formed by several bifurcating, vertical twigs.

The nests, internally, are all the same; cup-shaped, and lined with fine twigs and grass-roots. They are coated externally with cobwebs and vegetable fibres; dry leaves, grass, and paper often being incorporated in the structure. Externally the nests conform to the shape of the position in which they are placed;

but, generally speaking, are of the shape of an orange cut in halves.

The number of eggs laid is invariably three. In shape they do not appear to vary to any appreciable extent; but are, typically, rather elongated ovals, slightly pointed towards one end. The ground-colour is a pinkish white; while the markings, which are numerous and vary considerably in character, are composed of blotches, spots, specks, and smudges, of various shades of claret and reddish brown mixed together in every conceivable manner; many specimens presenting conspicuous secondary markings of a purple shade, which seem to show from under the surface of the shell. A normal egg would measure about 0.89 by 0.65 inch.

Molpastes bengalensis (282) .. The Bengal Red-vented Bulbul.

Local name Kala Bulbul.

Anglo-Indian name The Large Bulbul.

This species, so far as the plains are concerned, seems to have a curious distribution. But I write purely from personal observations. I have not seen this species at Allahabad, Cawnpore, or Benares; though it is possible they occur there. It occurs quite commonly in Oudh, and the submontane tracks; and

very commonly in Ghazipur, where it breeds from April to July.

The nesting habits, and construction of the nests, are almost identical with those of M. hemorrhous; save that four eggs are often laid, as against the other's three. Also the birds seem to have a weakness for building on the same trees as the Black Drongo, with whom they live on quite good terms. In general shape and colouration the eggs resemble those of M. hemorrhous, but taken as a whole they are slightly larger.

Otocompsa emeira (288) ... The Bengal Red-whiskered Bulbul.

Local name Kanera Bulbul.

Outside Oudh I have never met with this species in any of the plains stations of the Province; though it doubtless occurs in some of the districts in Rohilkhand. In Lucknow and Rae-Bareli it is quite common; and yet uncommon in the adjoining districts of Sultanpur and Partabgarh. In the districts where it occurs it is a familiar and sprightly garden bird, and breeds from about March to June. The Horticultural Gardens at Lucknow used to be a favourite nesting ground; while on the 15th April 1920 I took a nest with three eggs in a small croton plant on the verandah of the inspection house at Rae-Bareli.

The nests are rather typical of the species; being somewhat solid and untidy structures of grass roots and vegetable fibres. Internally they present the usual cup-shaped appearance with the lining of fine twigs closely and neatly interwoven. The exterior is plastered over with a certain amount of cobweb which helps in keeping the materials in place; dry leaves, bits of paper and sometimes rags, being incorporated. All the nests I have seen have been built in garden

crotons and shrubbery.

This species, like the two already described, become frightfully excited at the approach of any stranger towards their nursery; flitting from branch to branch and uttering loud, startling notes till the trespasser has departed to a safe distance. Consequently if one exercises a little patience, and plays the game of "hide the slipper," as it were, the "hot" and "cold" signs will be given by the birds themselves; the twittering becoming louder and louder, and the birds becoming more and more excited as one gets nearer the nest, which, by this method, is revealed in a very short time.

The number of eggs laid is invariably three, and they can, as a rule, be separated from those of *Molpastes* by the uniformity of the markings, consisting of numerous spots, specks, and minute blotches scattered profusely over the egg, as compared with the large irregular blotches of the others. Otherwise they are just the typical Bulbul's eggs with nothing particular or characteristic about them. In shape they are, typically, rather long ovals, somewhat pointed towards one end, and measure about 0.83 by 0.63 inch.

This is the only member of the family which seems to occur at all commonly in the plains of the Province, and is met with in most districts. Domestic operations are commenced, as a rule, in February; the bulk of the eggs being laid in March. All the nests I have examined in April have contained young, as has been the case with many others at the end of March; incubated eggs being of common occurrence.

The nest, unless one happens to hit up against it by accident, is one of the most difficult to find; so that the expedient of watching the birds has to be resorted to. I have found the nests on every conceivable kind of tree, though the Mango seems to be specially favoured. To begin with, a cavity or hole in some branch, large enough to contain the nursery, is selected, and the orifice built up with mud held in place with a salivery secretion together with a substance which looks like gum arabic. The masonry work often attains to a thickness of a couple of inches, and dries so hard as to necessitate the use of a hatchet when opening up the nest. An aperture, sufficiently large to allow one bird through, is left open. The hen then takes up her position inside the nest, which is invariably lined with bits of fine bark and dry leaves, lays her eggs, and never leaves them till they are hatched; after which she emerges to assist in feeding the young. During the period of incubation she is fed assidiously by the male who spends all the hours of daylight in frequent journeys to and from the nest.

He is a cunning little beggar too, and guards the secret of his nursery with the greatest care. When bringing food for his mate he never alights directly on the nest, but on some other branch in the vicinity, from which position he takes a careful look around in order to satisfy himself that the coast is clear. If satisfied he approaches the nest in a series of quick runs, never straight, but round the branches in a spiral course. At the nest-hole he stops again to make assurance doubly sure, and if quite satisfied, he enters; if not, he scuttles away to await a more favourable opportunity. His entry into the nest is only for a few seconds, when he emerges again to hang head downwards at the aperture, waving his little head from side to side. Having satisfied himself that all is well, he flies off in search of more food.

In the vicinity of the nest this little bird can be most aggressive, and intolerant of the presence of other small species. Quite recently while watching a nest in a tree in my compound I saw a large Lizard with a flaming head crawl to the nest-hole and peep inside. Whether he was contemplating an entry or not I cannot say, but at that moment the male bird arrived with food, and so great was his wrath that he mobbed the Lizard to such an extent as to force it to release its hold, when it fell to the ground with a thud; the little bird following it in its descent to earth.

The same nest, if not disturbed, is used for three or four years in succession, presumably by the one pair of birds, for it would be difficult to state this definitely. The masonry work is invariably quite strong enough to defy the elements, and requires very little renovating when brought into use the next season; though the mud structure is often done without if the birds can find a crevice or hole with an aperture of suitably small size. I saw no less than three instances of this last March.



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NEST AND EGGS OF THE MADRAS NEST OF THE RED-VENTED BULBUI,

NEST OF THE BENGAL REL-B) VENTED BULBUL,

BENGAL RED-WHISKERED NEST
BULBUL AND NEST, WR

NEST OF THE INDIAN WREN-WARBLER.

The number of eggs usually found in a nest is five. In shape they are slightly elongated ovals, only very slightly compressed towards one end. The ground-colour varies from a white to a very pale pink, and the markings, which vary considerably, consist normally of spots, specks, and minute blotches of a reddish shade scattered over the whole surface of the egg; but generally more so towards the large end, where they have a tendency to form an irregular zone, or cap. A normal specimen would measure about 0.67 by 0.52 inch.

Dicrurus ater (327) ... The Black Drongo.

Local name......Bojanga.Anglo-Indian name......King-Crow.

This is the one member of the family Dicruridae which breeds commonly in the plains of the Province; consequently it will be the only species regarding which I shall make mention. Two or three other species are known to breed in the hilly, forest regions to the North of the Gonda district; but I do not think they can be included amongst the common birds of the plains.

The Black Drongo is a common and familiar bird in most groves and gardens. A pleasant bird to watch as he indulges in ariel gyrations after the elusive insect; returning each time to some favourite perch to wait and watch for his next victim. An insolent bird, really, often darting past one's head to snap up an insect within a few inches of one's nose. Even cattle are forced to tolerate his presence, as he perches on their backs to catch the insects which they put up while grazing.

The Black Drongo is the one and only species of small bird which I have never seen attacked by a Shikra. In fact, he is capable of imitating the

Shikra's call, and seems to be immune from its depredations.

In the breeding season these birds become most aggressive; and are a plague to all feathered society in the vicinity of their nests; mobbing with deliberate intent any bird trespassing within their boundaries; especially birds of prey, no matter how large. They are capable of soaring straight up into the air at a rapid pace which enables them to get above the object of their attention from which advantageous position they rain blows on the offending bird's head till it is absolutely routed. I have watched them treat Tawny Eagles, Buzzards, and Kites to as good a mobbing as they would administer to a Crow, and without the least fear, apparently, of any of them striking back.

Though intolerant of the presence of most birds near their nests, and of a nature most aggressive, they either have a weakness for, or are hoodwinked by, smaller species like Bulbuls, Doves and White-eyes, which often share the same tree while nesting. Either the aggressive instincts of the Drongo are not lost upon these other species, who look to the Drongo to drive away intending robbers; or the Drongo tolerates their presence on the principle that two eyes are better than one, and trusts to them to give the alarm when necessary. Certainly no other species, save the three mentioned, seem to be allowed this domestic

liberty.

The Black Drongo breeds from about May to August. The nest is typical, and is always wedged into the angle of a forked branch. They are placed on large trees, usually high up, but I have also seen them at a distance of 8 feet from the ground. They are circular in shape, and made of coarse grass-roots and fine twigs, wrapped round and held in place with cobwebs. The egg-cavity is cup-shaped with the bottom comparatively frail and transparent; the eggs being quite visible from below. A great deal of seemingly unnecessary attention is paid to the construction of the rim, which protudes above the surface of the branch to a height of an inch or more, and which is a characteristic feature of the nest. This is made so strongly that it may still be seen intact after the egg-cavity has deteriorated and fallen away.

The eggs, usually three in number, are of three distinct types; a phenomenon which is probably influenced by the age and condition of the bird. In one the

ground-colour is salmon pink, and the markings, consisting of spots and specks of reddish brown, are scattered over the egg towards the large end. In the second the ground-colour is paler and the markings much darker; while in the third the ground-colour is pure white without spot or blemish of any kind. Others again, except for their size, are hardly distinguishable from the eggs of the Common Oriole. In shape the eggs vary a good deal, but are, typically, rather long ovals, somewhat pointed towards one end; a normal specimen measuring about 1:01 by 0:75 inch.

Orthotomus sutorius (374) ... The Indian Tailor-bird.

This species is commonly distributed throughout the Province, but on account of its small size and skulking habits is more often heard than seen. Its call, heard to greater advantage during the breeding scason, is clear, penetrating, metallic, and extraordinarily loud for such a small bird. It is met with only singly or in pairs, and is a familiar garden bird.

The period of nidification is from about June to September; most nests being started with the advent of the rains. The nests are typical, and comprise a soft, cup-shaped pad of cotton wool lined with horse-hair, placed inside the

cavity formed by sewing the edges of two or more leaves together.

The nests are invariably close to the ground on account of the birds' partiality for large leaved plants, which, as a rule, never grow to any height. Quite frequently the nests almost touch the ground, but occasionally, when built amongst

the leaves of Mango and Teak trees, are pretty high up.

The amount of labour entailed in sewing together the edges of more than one leaf must be colossal, and well worth a close study. But it falls to the lot of few to observe such a proceeding, so that most of us have to content ourselves with drawing conclusions from the completed nest. Quite recently, however, I had the good fortune to watch the construction of a single leaf nest; that is, a nest placed in the cavity formed by sewing together the edges of a single large

leaf, and the procedure was vastly interesting.

The plant selected in this instance was a wild jungle growth bearing stiff, green leaves, about four inches by five in size, and it was to this plant that I saw a Tailor-bird fly one morning carrying a lump of cotton wool in her bill. I approached the spot very carefully but could see no sign of any nest. It was soon to be started. Selecting a leaf the bird gripped the stem firmly with its feet, and stretching forward along the middle line of the leaf attached the ball of wool to a point farthest away from the stem, and on the leaf's under surface; securing the ball in place by knotting the protruding strand on the upper surface of the leaf. Then by using the ball as a sort of centre of supplies the bird contrived to draw the edges of the leaf together by a system of strands of cotton wool rotating in all directions, drawn from the ball and knotted on the outside of the leaf in the most ingenious manner. When the edges of the farthest end were thus temporarily secured, another lump of cotton wool was attached at a point nearer the stem, and the same process repeated and continued till the strain exerted by the strands, each one being made shorter than the one before, was sufficient to hold the leaf edges in position while they could be permanently secured. Many of the strands were then removed and the nest proper constructed in the cavity thus formed.

The nest was completed in ten days after numerous disappointments and set-backs. Sometimes the tension of the leaf would be too great for the strand holding the edges in place, and the bird returning with more material would find that the leaf had sprung back to its original position, with numerous strands floating in the breeze. At other times the knots, not being large enough, would pull through, thereby ruining the labour of a whole day. But nothing daunted, this little feathered artisan stuck to its self-imposed task, and as often as a

strand snapped, or a knot pulled through, so often were they renewed and strengthened. The bird's patience was inexhaustible, while the ingenuity it displayed in coping with its numerous difficulties was highly commendable.

In this species, the labour of nest construction seems to be undertaken almost exclusively by the female, as is also the work of incubation. But as soon as the young are hatched the male accepts his responsibilities, and shares in the

strenuous labours of rearing the brood.

The eggs are up to five in number, and of two distinct types. In one the ground colouring is a greenish blue, and in the other it varies from white to salmon pink. The markings in both types are the same, and consist of spots, speckles, and irregular blotches of a reddish brown shade, scattered all over the egg, but more so towards the large end. Some eggs show only the spots and speckles and some only the blotches, but a normal egg shows all, and measures about 0.64 by 0.46 inch. In shape the eggs are typically long ovals, often tapering towards the small end. The shells are very thin and translucent with but little gloss.

Cisticola cursitans (381). The Rufous Fantail-Warbler. Local name Ghas ka-phutki.

Anglo-Indian name .. Tic-tic.

This species is distributed throughout the Province in suitable localities; more abundantly in the vicinity of grass lands and rice cultivation. It is not in any sense a garden bird, but an inhabitant of open spaces usually removed

from the vicinity of human habitations.

The males of this species exhibit the curious characteristic common to the Ashy-crowned Finch-Larks; a characteristic by which they may be readily recognised. They soar suddenly into the air at a rapid pace, rising and falling in rapid undulations, and accompanying each upward motion with a loud "tic", a sound which in the breeding season never fails to attract attention. They feed on or near the ground, and are seldom or never seen flitting about on the tops of bushes or grass clumps after the fashion of the Indian Wren Warblers. The soaring habit, however, is most peculiar. It seems to be more pronounced in the breeding season, and apart from fulfilling any useful object often reveals the position of a nest so well concealed that in ordinary circumstances would certainly have escaped observation.

To search for one of these nests is like looking for a needle in a haystack; but, if one has the time to spare, a little patience and perseverence will often solve the riddle. During the breeding season the ticking call-notes are uttered continuously; not only when soaring, but also while feeding; so that having located the sound, which will invariably be found to emanate from a patch of low grass or rice, it will be advisable for the observer to take up a position as near as possible to the sound without drawing unnecessary attention to himself.

Very soon the male will rise rapidly into the air till he gets to a height of thirty or forty feet. There he commences to rise and fall, uttering his callnotes the while, which are answered by his mate beneath. Suddenly he descends to earth in a rapid nose dive to a spot different from where he started. The observer should make a mental note of the place of descent and

continue his watch.

The soaring will be repeated at comparatively short intervals; the bird descending in the same rapid manner, sometimes here, sometimes there, and perhaps frequently in the immediate vicinity of one particular spot. This spot should be carefully examined when a nest will probably be revealed. If this fails the other places of descent should be looked at, and if the nest is still not forthcoming, the birds are probably not breeding.

I mention this as a likely procedure (which I have tried myself) for locating the nest, and not as a hard and fast rule. In bird life there are idiosyncracies, and there is no accounting for behaviour in certain circumstances. But, from what I have been able to observe, the females of this species seem to devote themselves to the work of nest construction, while the males spend a good deal of time in aërial gyrations which appear to the casual observer to be of no practical value whatsoever. It may be for the purpose of cheering the female in her labours or for keeping a careful watch from aloft; but if taken advantage of

in the manner described it often reveals the presence of the nest.

The nests are wonderful structures and quite typical of the species. In shape they are mostly cylindrical, about 3 inches in depth with an egg-cavity of $1\frac{1}{2}$ to 2 inches across, tapering up to an aperture about an inch in diameter, and they are never placed at more than a few inches from the ground. tle habitation is constructed thus:—To begin with a few grass or rice stems are wound round with cobwebs and gossamer threads until a frail and hollow cylinder about 3 inches in height is formed, and on account of the stems being less pliable towards the ground, the cylinder assumes a shape slightly broader below than above. This preliminary stage seems to be executed with the most consumate care, for on its exactitude the success of the nest would seem to Once this cylinder has assumed the desired shape the work is hurried forward and the egg-cavity commenced by other stems being incorporated at the bottom and carefully welded together with cobwebs and fine vegetable fibres. At this juncture the nest is still very frail and is strengthened throughout by the incorporation of more stems and further coatings of cobwebs and vegetable fibres. Usually twigs growing overhead are drawn down to form a canopy over the nest in order to facilitate concealment, and the whole structure completed by the addition of an internal lining of soft, silky, vegetable down. In some cases the nests appear to be constructed throughout of cobwebs only, when they look very like large, spider's nests with the trap doors let in on top.

The breeding season seems to continue throughout the rains, though the bulk seem to have eggs in May, June, and July. The maximum complement of eggs is five, though one usually finds three or four, not infrequently only two. In shape they are rather short ovals slightly pointed towards one end, and the variation in colouration is pretty wide. The ground-colour is invariably white; sometimes pale pink, when fresh; and occasionally presenting a faint green tinge. The markings consist mostly of multitudinous specks and spots of a reddish brown shade scattered all over the egg. In some eggs the markings are scanty, in some profuse; while others present spots, specks, and minute blotches confined more or less to the large end and coalescing in places. A

normal egg would measure about 0.59 by 0.46 inch.

Prinia socialis (464) The Ashy Wren-Warbler.
Local name Kala-phutki.

Anglo-Indian name Tom-tit.

This species breeds fairly commonly throughout the Province; its only claim to notoriety being due to the peculiarity that the one bird builds two totally different kinds of nests; a fact which has been, and still is, something in the nature of a puzzle to the ornithologist. Factors like climatic conditions, environment, and protective colouration, would seem to bear no significance whatsoever; for both types of nest occur, with comparative regularity, in similar localities. The eggs in each case are the same, the birds undoubtedly of the same species, but the reasons for the difference in nest construction still remain a mystery.

The birds are met with as frequently in gardens and shrubbery as in high grass, sugar-cane, and "Bajra" crops. Some, when embarking on the work of nidification, emulate the Indian Tailor-Bird, others the Indian Wren-Warbler. It may be argued that the architecture of the nest is influenced purely by environment to the extent that the bird uses material which is available in the immediate vicinity. This is plausible, but then how is one to account,